

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of the claims in the application:

LISTING OF CLAIMS

1. (Withdrawn) A method to fasten an outer shell in a gyratory crusher, which comprises the outer shell, which is to be fastened in a frame included in the crusher, and an inner shell, which is intended to be fastened on a crushing head and to define, together with the outer shell, a crushing gap for receipt of material to be crushed, wherein in a first step a first abutment surface on the outer periphery of the outer shell is brought to abutment against a first contact surface on the frame, and in that in a second step a spacer member for clamping of the outer shell is pressed in between a second abutment surface on the outer periphery of the outer shell and the frame.

2. (Withdrawn) The method according to claim 1, wherein said first abutment surface is situated at the lower end of the outer shell seen in a material flow direction, said second abutment surface being situated closer to the upper end of the outer shell seen in the material flow direction.

3. (Withdrawn) The method according to claim 2, wherein in the second step the spacer member is pressed in between the second abutment surface and the frame in the direction towards the first abutment surface.

4. (Withdrawn) Method according to claim 1, wherein in the first step the outer shell is secured after the first abutment surface thereof has been brought to abutment against the first contact surface of the frame, in the second step the spacer member being secured after it having been pressed in between the second abutment surface of the outer shell and the frame.

5. (Withdrawn) Method according to claim 1, wherein the spacer member has a first sliding surface and a second sliding surface opposite the first sliding surface, the first sliding surface sliding against the second abutment surface of the outer shell and the second sliding surface sliding against a second contact surface on the frame when the spacer member is pressed in.

6. (Currently Amended) Outer shell for fixing in a gyratory crusher, ~~which comprises that includes~~ a frame, ~~wherein the outer shell should be fastened~~, and an inner shell, which is securable on a crushing head in order to, together with the outer shell, define a crushing gap for receipt of material to be crushed, comprising: ~~wherein the outer shell has~~

a first abutment surface, which is ~~arranged~~ configured to, ~~in a first fixing step, be brought to abutment~~ abut against a first contact surface on the frame, wherein the first abutment surface forms an angle to a vertical plane of 10–55 degrees, and

a second abutment surface that is ~~arranged~~ configured to, ~~in a second fixing step, be brought in engagement~~ engage with a spacer member that is possible to press between the frame and the second abutment surface, wherein the second abutment surface forms an angle to a vertical plane of 0–20 degrees and is configured to slide against a first sliding surface on the spacer member, and

wherein there is at least one surface along the outer shell between the first and second abutment surfaces that forms an angle to a vertical plane of 0 to 55 degrees and the angle is different than the angle for either the first or second abutment surface.

7. (Currently Amended) Outer shell according to claim 6, wherein said first abutment surface is situated at the lower end of the outer shell ~~seen in a material flow direction~~, said second abutment surface being situated closer to the upper end of the outer shell ~~seen in the material flow direction~~.

8. (Canceled).

9. (Previously Presented) Outer shell according to claim 6, wherein the second abutment surface is substantially perpendicular to the main direction of the crushing forces that during operation arise in plane with the second abutment surface.

10. (Currently Amended) Outer shell according to claim 6, wherein the first abutment surface ~~forms an angle to the vertical plane of 10–55 degrees, preferably such an angle that the~~

~~first abutment surface~~ forms a substantially right angle to the main direction of the crushing forces that during operation arise in plane with the first abutment surface.

11. (Previously Presented) Outer shell according to claim 6, wherein the second abutment surface is situated substantially on a level with the portions of the periphery of the outer shell that surround the second abutment surface.

12. (Currently Amended) Gyrotory crusher comprising;~~which has~~
a frame;
an outer shell, which is securable in ~~[[a]]~~ the frame;~~included in the crusher;~~ and
an inner shell, which is securable on a crushing head in order to, together with the outer shell, define a crushing gap for receipt of material to be crushed when flowing through the gap,

wherein the outer shell of the crusher has an outer surface that includes a first abutment surface,~~which is arranged to, in a first fixing step, be brought to abutment against~~ contacts a first contact surface on the frame, and a second abutment surface that contacts ~~is arranged to, in a second fixing step, be brought in engagement with~~ a spacer member ~~that is possible to press in~~ between the frame and the second abutment surface, and

wherein a portion of the outer surface of the outer shell between the first and second abutment surfaces does not contact the frame or spacer member, and

wherein the second abutment surface forms an angle to a vertical plane of 0–20 degrees.

13. (Previously Presented) Gyratory crusher according to claim 12, wherein said first abutment surface is situated at the lower end of the outer shell seen in a material flow direction, said second abutment surface being situated closer to the upper end of the outer shell seen in the material flow direction.

14. (Previously Presented) Gyratory crusher according to claim 12, wherein the spacer member is an intermediate ring, which has a substantially tubular part, which is intended to be pressed in between the second abutment surface of the outer shell and a second contact surface on the frame.

15. (Previously Presented) Gyratory crusher according to claim 12, wherein the spacer member is divided into two to eight segments.

16. (Currently Amended) Gyratory crusher according to claim 12, wherein the spacer member has a first sliding surface, which forms an angle to the vertical plane of 0–20 degrees and which is arranged to slide against the second abutment surface on the outer shell upon [[the]] pressing-in of the spacer member.

17. (Previously Presented) Gyratory crusher according to Claim 12, wherein the spacer member has a second sliding surface, which is arranged to slide against a second contact surface on the frame, which second contact surface is terminated by a shoulder protruding from the

frame, the lower limitation, in the material flow direction, of the shoulder being situated substantially at the lower limitation, seen in the material flow direction, of the sliding surface.

18. (Previously Presented) Gyratory crusher according to claim 17, wherein the second contact surface of the frame forms an angle to the vertical plane of 0–10 degrees.

19. (Previously Presented) Gyratory crusher according to claim 12, wherein the upper portion, in the material flow direction, of the spacer member is protected by a replaceable protecting plate.

20. (Previously Presented) Gyratory crusher according to claim 12, wherein the spacer member has a mounting flange, which by means of mounting members is arranged to press the spacer member in between the second abutment surface of the outer shell and the frame and to secure the spacer member against the frame.

21. (Withdrawn) Spacer member for use upon fixing of an outer shell in a frame included in a gyratory crusher, which outer shell is intended to, together with an inner shell, which is securable on a crushing head, define a crushing gap for receipt of material to be crushed in the crusher, the outer shell having a first abutment surface, which in a first fixing step has been brought to abutment against a first contact surface on the frame, and the spacer member being arranged to, in a second fixing step, be pressed in between a second abutment surface on the outer shell and the frame.